FIG 1 Prior Art

Clock	Command (Bank A)
1	act-A-adr 1
2	0
3	rd-A-adr 1
4	0
5	0
6	0
7	pre-A-adr 1
8	0
9	act-A-adr 2
10	0
11	rd-A-adr 2
12	0
13	0
14	0
15	pre-A-adr 2
16	0

FIG 2 Prior Art

Clock	Command
1	act-A
2	pre-B
3	rd-A
4	act-B
5	pre-C
6	rd-B
7	act-C
8	pre-D
9	rd-C
10	act-D
11	pre-A
12	rd-D

ord = {act, pre, rd, wr}

X = {A, B, C, D}

FIG 3
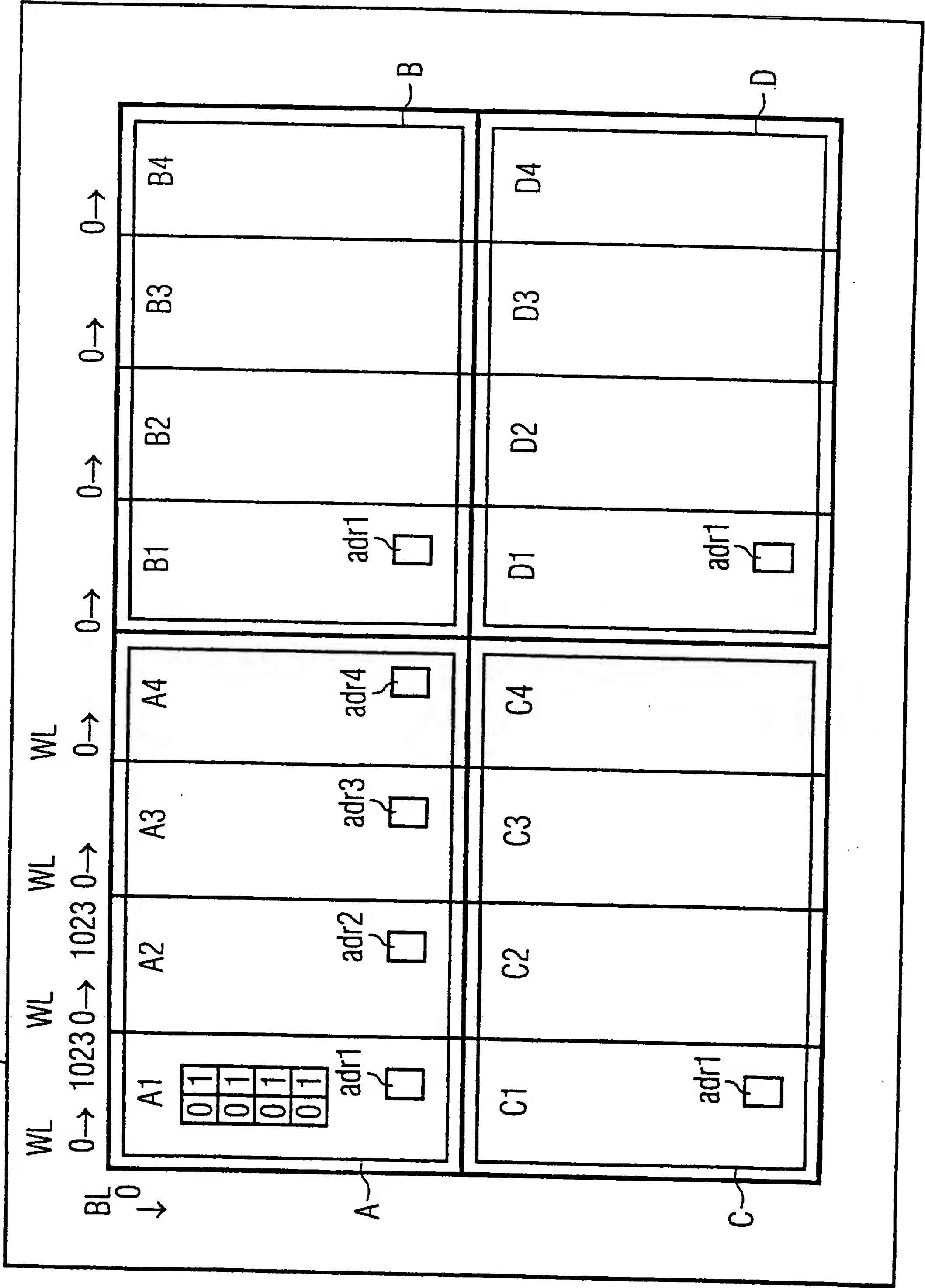
FIG 4

Command Sequence {ord-Xn-adrN} :

Clock Period	12A (Bank A)	12B (Bank B)	12C (Bank C)	12D (Bank D)	
1	act-A1-adr 1	act-B1-adr 1	act-C1-adr 1	act-D1-adr 1	
2	pre-A2-adr 2	pre-B2-adr 2	pre-C2-adr 2	pre-D2-adr 2	
3	rd-A1-adr 1	rd-B1-adr 1	rd-C1-adr 1	rd-D1-adr 1	
4	act-A2-adr 2	act-B2-adr 2	act-C2-adr 2	act-D2-adr 2	
5	pre-A3-adr 3	pre-B3-adr 3	pre-C3-adr 3	pre-D3-adr 3	
6	rd-A2-adr 2	rd-B2-adr 2	rd-C2-adr 2	rd-D2-adr 2	
7	act-A3-adr 3	act-B3-adr 3	act-C3-adr 3	act-D3-adr 3	13
8	pre-A4-adr 4	pre-B4-adr 4	pre-C4-adr 4	pre-D4-adr 4	
9	rd-A3-adr 3	rd-B3-adr 3	rd-C3-adr 3	rd-D3-adr 3	
10	act-A4-adr 4	act-B4-adr 4	act-C4-adr 4	act-D4-adr 4	
11	pre-A1-adr 1	pre-B1-adr 1	pre-C1-adr 1	pre-D1-adr 1	
12	rd-A4-adr 4	rd-B4-adr 4	rd-C4-adr 4	rd-D4-adr 4	
13	act-A1-adr 5	act-B1-adr 5	act-C1-adr 5	act-D1-adr 5	
14	pre-A2-adr 6	pre-B2-adr 6	pre-C2-adr 6	pre-D2-adr 6	
15	rd-A1-adr 5	rd-B1-adr 5	rd-C1-adr 5	rd-D1-adr 5	
16	act-A2-adr 6	act-B2-adr 6	act-C2-adr 6	act-D2-adr 6	
17	pre-A3-adr 7	pre-B3-adr 7	pre-C3-adr 7	pre-D3-adr 7	
18	rd-A2-adr 6	rd-B2-adr 6	rd-C2-adr 6	rd-D2-adr 6	
19	act-A3-adr 7	act-B3-adr 7	act-C3-adr 7	act-D3-adr 7	14
20	pre-A4-adr 8	pre-B4-adr 8	pre-C4-adr 8	pre-D4-adr 8	
21	rd-A3-adr 7	rd-B3-adr 7	rd-C3-adr 7	rd-D3-adr 7	
22	act-A4-adr 8	act-B4-adr 8	act-C4-adr 8	act-D4-adr 8	
23	pre-A1-adr 5	pre-B1-adr 5	pre-C1-adr 5	pre-D1-adr 5	
24	rd-A4-adr 8	rd-B4-adr 8	rd-C4-adr 8	rd-D4-adr 8	
	13A, 14A	13B, 14B	13C, 14C	13D, 14D	

FIG 5

Access Operations to A1 :

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1 — Activate the word line WL_N in the subarea A1 of bank A

3 — Read a data bit (0;1) from the memory address adr1, connected to the word line WL_N, in the subarea A1 of bank A

11 — Deactivate the word line WL_N in the subarea A1 of bank A

Clock period